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THE HANNA MINING COMPANY | ANNUAL REPORT 1960

The Hanna Mining Company

General Office: Cleveland, Ohio

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George H. Love
W. A. Marting
W. H. Moore
N. W. Pearson
H. L. Pierce
J. H. Thompson
R. W. Whitney

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W. A. Marting, *President*

R. W. Whitney, *Executive Vice President*

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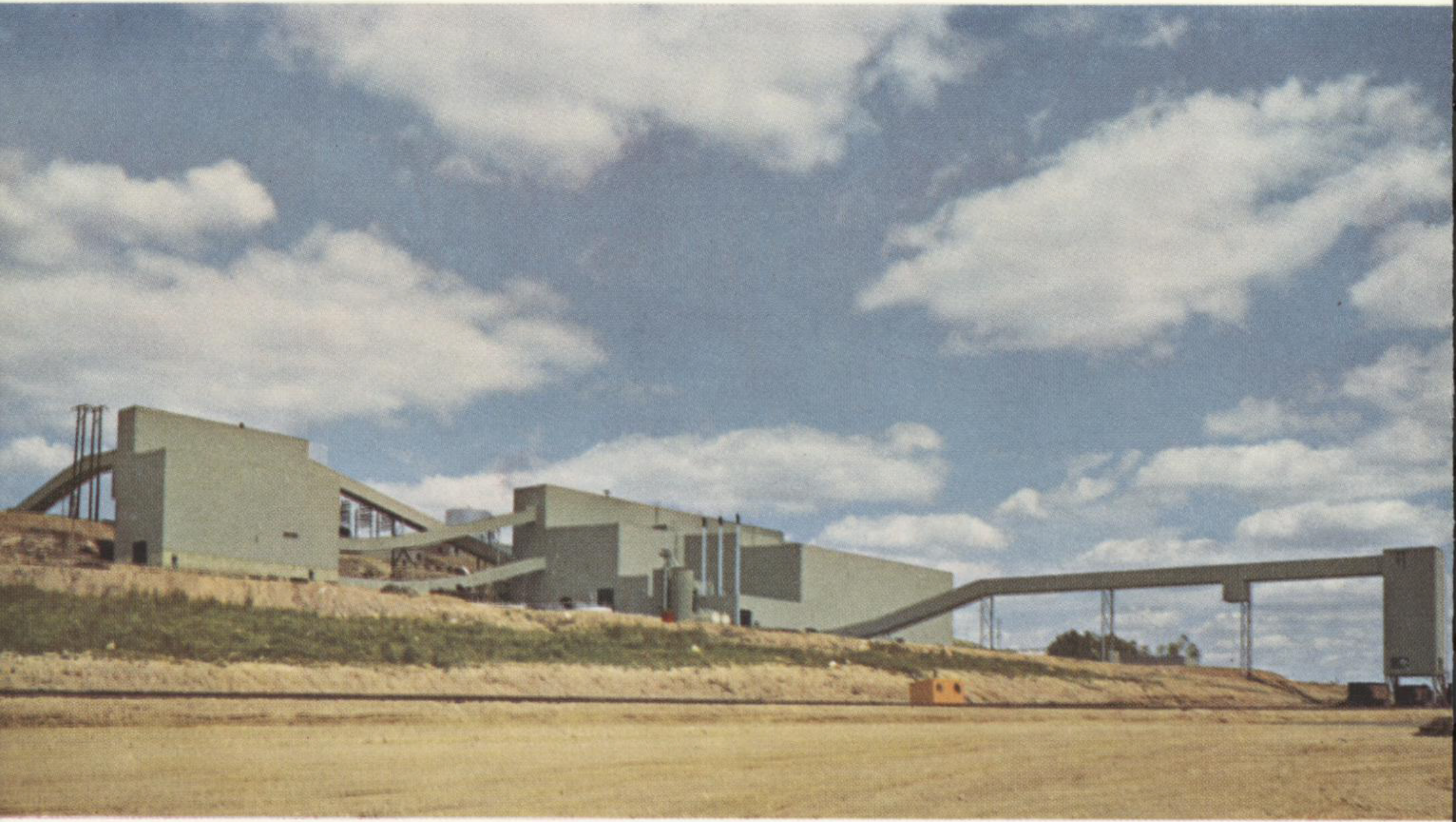


Groveland beneficiation plant, in upper Michigan, produces high grade iron ore concentrates from jasper, a low grade iron-bearing rock.

Ore from the Quebec-Labrador fields is loaded into vessels at Sept Iles, in the Gulf of St. Lawrence, for movement to the Great Lakes, U. S. Atlantic coast ports and Europe.

To the Stockholders of The Hanna Mining Company

Net profit in 1960 was $10,107,403, equal to $7.07 per share of common stock. This compares to $7,751,730, or $5.42 per share, in 1959. Dividends of $1.60 a share were paid in both years. Last year's results were the second best in the history of the company, exceeded only by the $10,219,045 net profit of 1957.

Our capital expenditures and new investments in associated companies totaled $2,347,933. Net working capital at year-end increased to $24,653,582, as compared to $13,653,128 at the end of 1959. This large increase is very desirable, as it enables us to make expected commitments in the future and still consider new opportunities for strengthening and expanding our business. Increasing amounts of working capital are required in our industry today to meet the higher capital and other costs for new developments.

The year was marked by progress in the major areas of our business. Our iron ore operations began receiving the benefits of many important improvement programs that have been underway for several years. Our nickel operations showed further improvement and we are taking steps to enlarge our activities in this field. Substantial expenditures were made for research and encouraging results came from the major exploration and new development projects now being carried on.

Iron Ore

Domestic Sources—Our properties in Michigan, Minnesota and Missouri produced 2,799,363 tons of iron ore and concentrates in 1960, as compared to 1,944,499 tons in 1959.

Total ore sold in 1960 was 8.6 million tons. This represents 2.6 million tons from our own properties and 4.9 million tons purchased from affiliated companies in which we have an interest, including our share of the production of Iron Ore Company of Canada. The balance was purchased from other companies. In 1959 total ore sales were 7.2 million tons.

Production and sales of iron ore during the early months of the year were at capacity levels as the steel industry labored to replenish steel stocks that had been reduced as a result of the long strike in 1959. Mining activity in general continued at a high level until mid-summer when it began to appear that the anticipated increase in steel production in the third and fourth quarters was not going to materialize. At that point we began reducing our operations but were able to maintain a reasonable rate of activity for the balance of the year.

Our Groveland mine and jasper beneficiation plant, near Iron Mountain, Mich., produced a near-capacity 670,882 tons in its first full year of operation. The efficiency of the plant exceeded our expectations and further improvements should come as our experience broadens. We are completing technological work and planning, looking in the near future to expanding the plant capacity substantially and constructing a plant to produce high grade pellets from the concentrates.

The Wauseca Mine shipped 696,985 tons of ore, which, with the tonnage from Groveland, brought our Michigan shipments to their highest point in history. Wauseca benefited from the first full year of use of the large new shaft it shares with National Steel Corporation's Homer Mine.

Our mining operations as a whole derived benefit from the extensive amount of winter work and stripping activity that had been completed and written off the year before in anticipation of a year of high production in 1959.

Quebec-Labrador—Production of Iron Ore Company of Canada in 1960 was 10.1 million tons, as compared to 12.6 million tons in 1959 when its operations were stimulated by the steel strike in the United States. Of the 1960 production, 1.6 million tons were for the account of the two concession companies, Labrador Mining and Exploration Company Limited and Hollinger North Shore Exploration Company Limited.

Excellent progress was made at Carol Lake, where a 7 million-ton-per-year beneficiation plant, related facilities and town are being constructed at an estimated cost of approximately $135,000,000. First elements of the plant are to be in operation in June 1962, with full production of high grade iron ore concentrates planned for the following December.

The 40-mile railroad, which connects the plant site and the Quebec, North Shore and Labrador Railway at Mile 224, was completed in the spring. A major portion of the concrete for the plant was poured during the winter and construction was started on facilities to provide hydro-electric power. Construction of the town to house 2400 people is on schedule and the airstrip was finished. The mining plan is being completed and it was determined that operations will begin at the Smallwood Mine, named in honor of the Premier of Newfoundland.

One important result of the extensive pilot plant work conducted at Carol Lake was the favorable performance of autogenous grinding equipment, in which crude ore is reduced to final size in one operation, eliminating two stages of crushing and the rod grinding mills that have been used heretofore in large iron ore concentrating plants. The Carol Lake plant will have six autogenous mills, 21 feet in diameter, with a total grinding capacity of about 50,000 tons of crude ore a day.

The ore drying plant at Sept Iles, completed in August, handled 493,543 tons of ore with highly satisfactory results. It has an annual capacity of 1 million tons. This processing reduces the moisture content, bringing improvement in ore handling qualities and contributing to better blast furnace operation. The engineering work for the adjacent ore washing plant was completed.

Now under construction at Sept Iles is a second ore stacker, which will increase the ore storage capacity of the dock.

Shipping and Docks

Because of the curtailment of shipments in the latter part of the summer, one of our Great Lakes ore vessels operated until mid-August, one until the middle of September and the third was active until normal lay-up time. The SS. Joseph H. Thompson, of which we are part owner, operated until early November.

Our ocean vessels were kept busy throughout the year. The SS. Ruth Lake and the SS. Sept Iles, of which we have part ownership, carried iron ore from Sept Iles to Rotterdam and U. S. Atlantic coast ports during the season and general bulk freight during the balance of the year. The SS. Knob Lake, a small bulk cargo carrier, engaged primarily in general world trade during the year. We acquired the Knob Lake before the Seaway opened to carry Labrador ore up the St. Lawrence River for

Ferro-nickel, produced at the smelter in Oregon, is cast into pigs in this continuous machine.

transshipment to midwestern steel plants. Today our requirements are for lake-type vessels and extremely large ocean-going ships. In December the Knob Lake was sold for the amount carried on our books and the proceeds were added to working capital.

The two Canadian registry lake-type vessels in which we have an interest, SS. Menihek Lake and SS. Carol Lake, brought 414,224 tons of iron ore from Sept Iles through the Seaway to Lake Erie ports in 1960. The Menihek Lake, delivered in 1959, made 13 round trips during the year. The Carol Lake, which went into service early in September, made five round trips with an average ore cargo of nearly 23,000 tons.

In Rotterdam the fast, modern, American-type dock we built with Dutch associates received more than 2.4 million tons of ore from Canada, Sweden, Liberia, India, Chile, Brazil, Venezuela and Peru. This was the first full year of operation for the dock, which serves as an important transshipment and storage point for ore bound for steel plants in the Ruhr Valley and other European destinations.

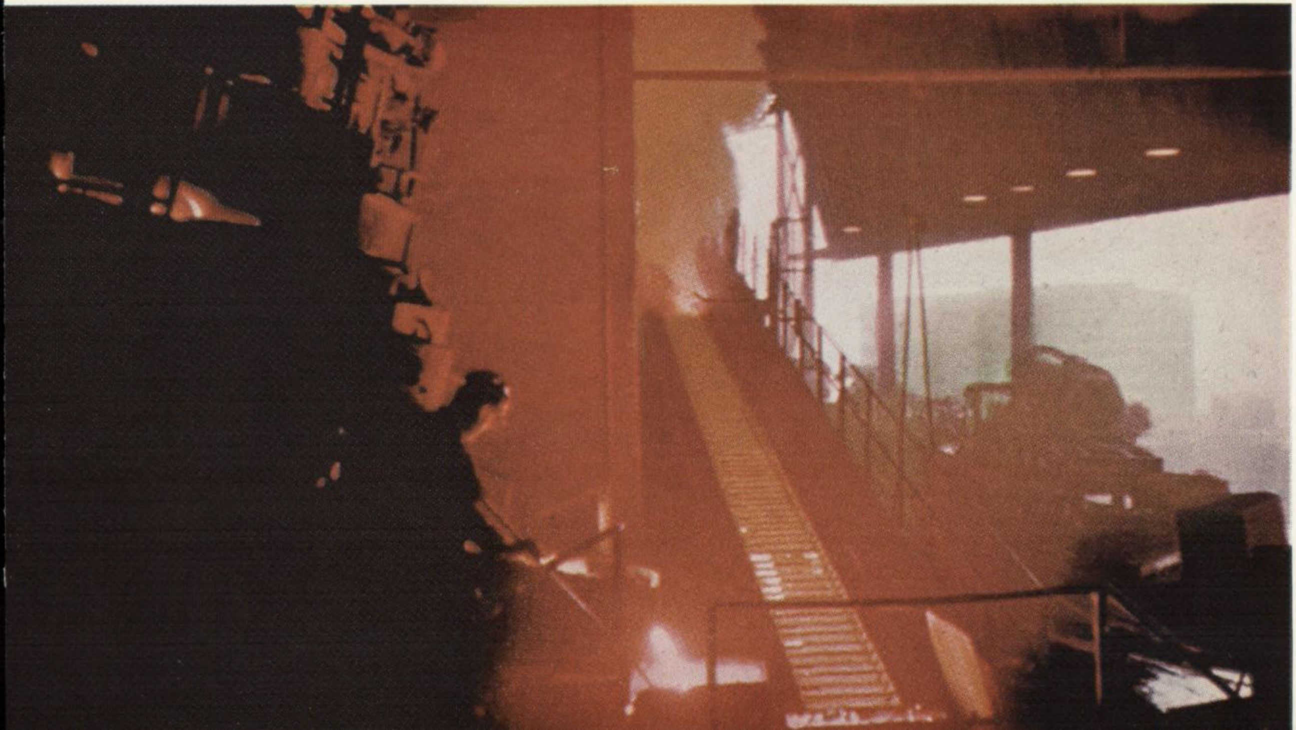
Nickel

Since 1955 we have operated a plant at Riddle, Oregon, smelting nickel ore from our nearby mine. During this period more than 100 million pounds of contained nickel have been produced, all of which have been for the account of the Government to help supply the urgent demands for the defense materials stockpile of this strategic material.

With considerable success over the past five years, we have conducted an extensive and continuing program to improve the recovery of nickel and to increase productivity. We know the capabilities of the plant and we know the product is of top quality.

We are currently making plans, subject to the outcome of negotiations with the Government, to acquire the smelter and enter the ferro-nickel field as the only U. S. producer of this steel alloying material. In this connection we have been conducting a market survey to determine the quantity of the product which can be sold to steel producers.

This is a field where competition is great. We believe, however, that alloy steel production will grow more than the industry as a whole and as a result of our five years of experience in operating the plant we feel that we have the ability to produce ferro-nickel competitively.



Research

The major objective of our research activity is to make the best possible product for the blast furnace. Our efforts are focussed on concentration of ore to give the best iron-to-silica ratio, and devising the best possible physical structure through agglomeration, either sintering or pelletizing.

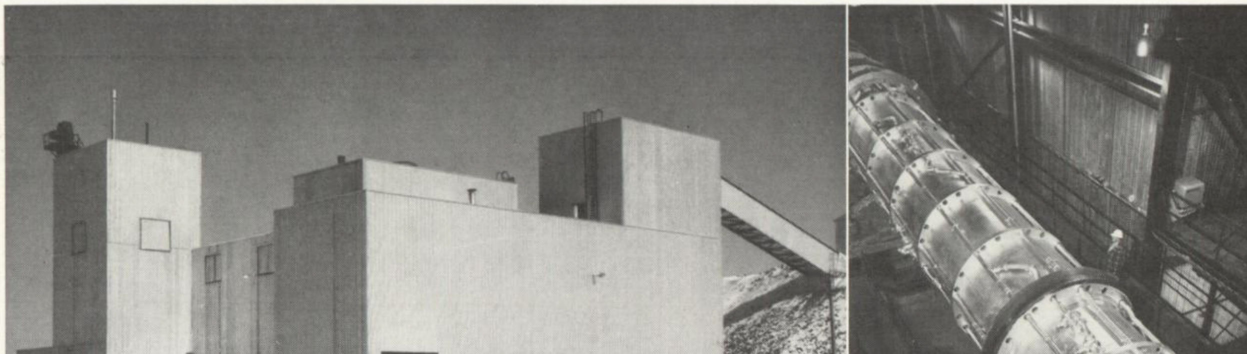
Operations have just begun in the $2 million pilot plant that is testing the commercial feasibility of beneficiating semi-taconites in the Cooley District at the west end of the Mesabi Range. Preliminary research in our Hibbing laboratory had established that it is possible to beneficiate many of these ores, of which there are large tonnages on our properties. Test runs of quantities up to the pilot plant kiln capacity of 250 tons a day are necessary to determine the operating costs of a commercial size operation. Test work will continue through 1961.

As part of our long-range research we are establishing pilot plant facilities in our Hibbing laboratory to study flotation methods for improving oxidized taconites, semi-taconites and similar ores from other areas where non-magnetic iron ore occurs in quantity. Also in Hibbing we are constructing a research building for extending our studies of agglomeration.

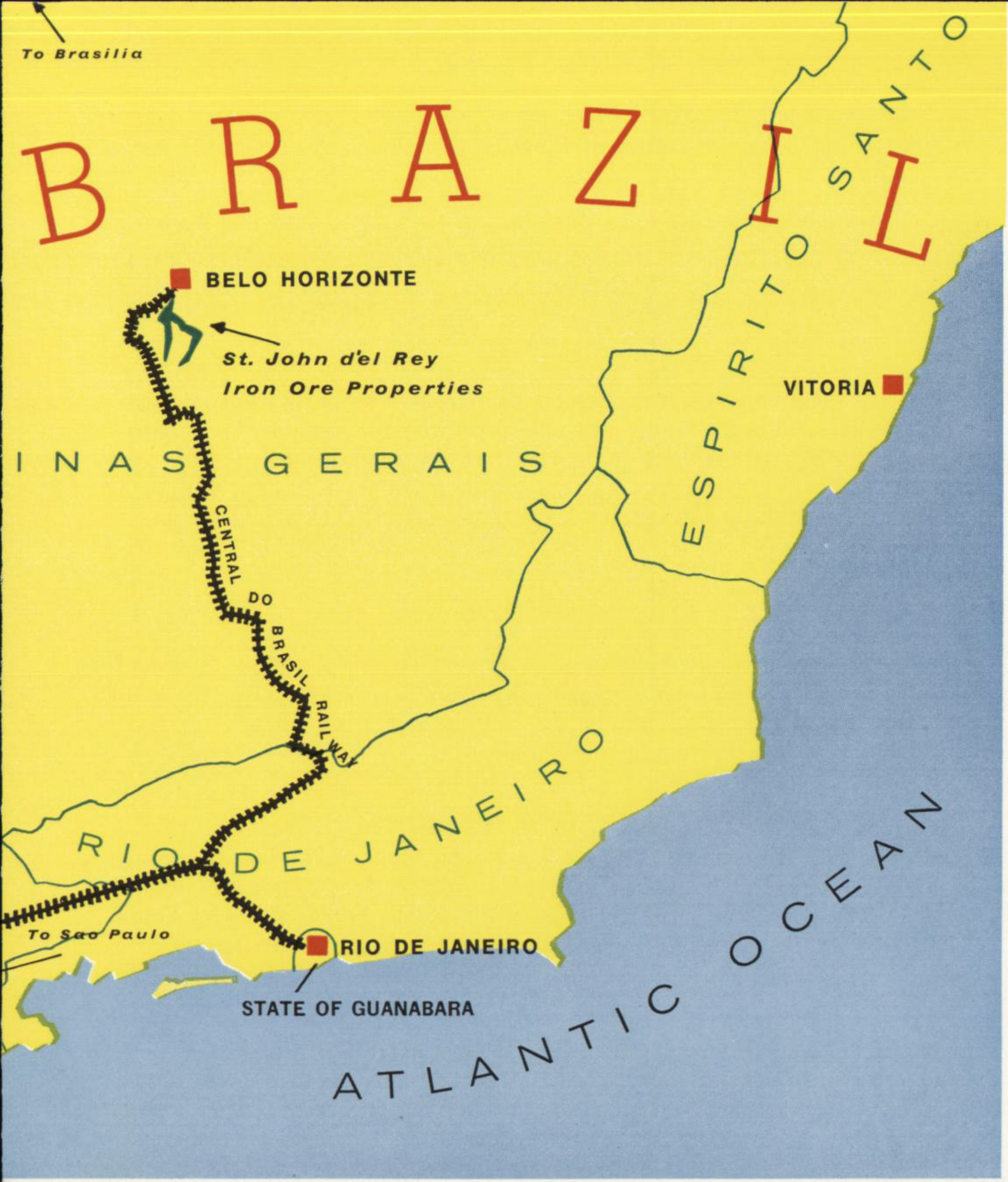
During 1960 pelletizing work was done on concentrates from the Carol Lake project. During this year further pelletizing investigation will be conducted in this country and in Germany and blast furnace studies will be made. In 1960, with our associates in Iron Ore Company of Canada, we conducted comprehensive research into the sintering characteristics of Carol concentrates by themselves and blended with other ores. Research continues on methods to improve recovery of the Carol Lake non-magnetic ore.

The sintering of ore fines from the Brazilian properties was tested last year and an excellent product for the blast furnace resulted.

Blast furnace tests on agglomeration from Groveland concentrates were conducted in 1960 and it was established that high grade pellets from this property give a superior performance.



Test runs have begun in the semi-taconite pilot plant in Minnesota. A key piece of equipment is the kiln, at right, which converts non-magnetic ore to artificial magnetite, making possible the concentration of the low grade ore by means of magnetic separation.



The St. John d'el Rey iron ore deposits are about 325 air miles from Rio de Janeiro and 375 air miles from Brasilia.

Exploration, New Developments

In connection with the semi-taconite research program in Minnesota a coordinated geological and metallurgical study of the Cooley District properties was conducted throughout the year. Mapping, drilling, bulk sampling and metallurgical test work were involved. The effectiveness of the work was aided by the adoption of a modern mud-drilling technique and modern diamond bits, which brought better core recovery.

In Missouri we continued drilling the large new ore body we discovered in 1957 and developed the mining plan for an underground operation. Our studies of economic feasibility indicate that the property will support a major beneficiation plant producing a high grade iron ore concentrate. The ore occurs at a shallow level and can be recovered with relative ease. It can be economically beneficiated and can be readily sintered or pelletized.

Progress was made in Brazil at the properties of the St. John d'el Rey Mining Company, Limited, in which we and our associates hold a controlling interest. Arrangements were made for transferring the gold mines and related facilities to a Brazilian group, with retention by St. John d'el Rey of a minority interest in the gold properties. Engineering and cost estimates for an iron ore operation were made and exploration and preliminary development of the large Aguas Claras and Mutuca II bodies of high grade ore were completed. Arrangements were made for the use of a small island west of Rio de Janiero to serve as an ore storage and loading facility. Progress has been made in developing a market for the iron ore but numerous problems remain, including securing approval by the Brazilian government of the basic elements of a proposed commercial project and arranging for suitable transportation of the ore to the seacoast. Negotiations are continuing with the new Brazilian government concerning a development for production of high grade ore for export to the U. S. and Europe.

For a number of years we have been investigating and developing a large concession which contains laterite nickel deposits near Lake Izabal in Guatemala. During 1960 we completed arrangements with International Nickel Company of Canada for the joint exploration of this concession.

Litigation continues in connection with the cancellation by the government of Venezuela of the Maria Luisa Ore Company's concession, of which we are 75 percent owner. Our total expenditures on this project, in the amount of $1,659,000, have been charged against income over the past several years.

* * *

Early in May, W. A. Marting, formerly Executive Vice President, was elected President and Chief Executive Officer of The Hanna Mining Company, succeeding Gilbert W. Humphrey, who was elected President of The M. A. Hanna Company. Joseph H. Thompson remains as Chairman of The Hanna Mining Company Board of Directors. At the same time, Richard W. Whitney, formerly Hanna Mining Vice President in Charge of Mining Operations, was elected Executive Vice President.

* * *

While it appears that in 1961 our European sales and foreign operations may be maintained at their current levels, the outlook in the United States is not as bright. Ore sales in 1960 held up better than steel production. However, with steel plant stockpiles of ore at unusually high levels, demand for ore in the domestic market in 1961 can be expected to lag behind an upturn in steel production. Indications now are that our volume of business in 1961 will be down from last year even if steel production increases substantially.

We have made a determined attempt in recent years to put ourselves in a position to withstand temporary levelings of business activity with a minimum adverse effect. Simultaneously, we have tried to build our organization and our resources so that fullest advantage can be taken of new opportunities. We believe that from the standpoints of both personnel and financial condition, The Hanna Mining Company is equipped to maintain its competitive position and to increase its service to the steel industry of the free world.

By Order of the Board of Directors,

JOSEPH H. THOMPSON
Chairman of the Board

W. A. MARTING
President

Cleveland, Ohio, March 10, 1961

THE HANNA MINING COMPANY

Consolidated Income and Earnings Used in the Business

INCOME

	YEAR ENDED DECEMBER 31, 1960	YEAR ENDED DECEMBER 31, 1959
Operating profit before depreciation, depletion, amortization, and development	$14,747,030	$11,361,250
Dividend income	4,190,054	3,146,937
Interest income—net	976,234	723,087
Sundry income—net	1,266	87,318
	$19,914,584	$15,318,592
Depreciation, depletion, amortization, and development	5,066,681	4,446,288
Profit Before Taxes on Income	$14,847,903	$10,872,304
Taxes on income—estimated	4,740,500	3,120,574
Net Profit	$10,107,403	$ 7,751,730

EARNINGS USED IN THE BUSINESS

	1960	1959
Balance at beginning of year	$64,188,010	$58,724,544
Net profit for the year	10,107,403	7,751,730
	$74,295,413	$66,476,274
Cash dividends paid—$1.60 a share	2,288,264	2,288,264
Balance at End of Year	$72,007,149	$64,188,010

See notes to financial statements.

THE HANNA MINING COMPANY

Consolidated Balance Sheets

ASSETS

	DECEMBER 31, 1960	DECEMBER 31, 1959
Current Assets		
Cash	$ 1,332,932	$ 1,350,087
U. S. Government and other short-term securities—at cost	23,437,666	9,585,101
Trade and sundry receivables	8,742,318	11,195,634
Inventories—at lower of average cost or market		
Iron ore	$ 1,860,407	$ 2,230,708
Supplies	656,520	711,131
	$ 2,516,927	$ 2,941,839
Total Current Assets	$ 36,029,843	$ 25,072,661
Investments		
Securities of Iron Ore Company of Canada—at cost	$ 21,411,000	$ 21,411,000
Common stock of The M. A. Hanna Company—at cost	21,146,600	21,146,600
Other investments, less allowances—Notes A and B	13,231,103	11,670,768
	$ 55,788,703	$ 54,228,368
Property, Plant, and Equipment		
Mineral lands, plants, vessels, and equipment—mainly at cost	$ 37,285,855	$ 39,974,704
Less allowances for depreciation, depletion, and amortization	19,923,933	17,891,072
	$ 17,361,922	$ 22,083,632
Deferred Charges		
Advance mining royalties	$ 784,911	$ 691,031
Prepaid expenses and sundry items	225,267	178,723
	$ 1,010,178	$ 869,754
	$110,190,646	$102,254,415

LIABILITIES AND STOCKHOLDERS' EQUITY

	DECEMBER 31,	
	1960	1959
Current Liabilities		
Trade accounts and sundry items	$ 7,055,772	$ 7,282,139
Accrued items, other than taxes on income	4,172,069	3,961,293
Taxes on income—estimated	2,648,420	1,176,101
U. S. Government securities	*(2,500,000)*	*(1,000,000)*
Total Current Liabilities	$ 11,376,261	$ 11,419,533
Reserves		
General contingencies	$ 1,543,126	$ 1,465,171
Other	965,258	882,849
	$ 2,508,384	$ 2,348,020
Stockholders' Equity		
Common stock, par value $1 a share		
Authorized 1,500,000 shares		
Outstanding 1,430,165 shares	$ 1,430,165	$ 1,430,165
Capital surplus	22,868,687	22,868,687
Earnings used in the business	72,007,149	64,188,010
	$ 96,306,001	$ 88,486,862
	$110,190,646	$102,254,415

See notes to financial statements.

Notes to Financial Statements

Note A—Amounts for other investments are based mainly upon cost or carrying amounts for assets exchanged for securities, less reserves, and include investments in subsidiaries not consolidated carried at the net amount of $8,242,192. Dividend income from such subsidiaries exceeded the Company's proportionate share of net profits of these subsidiaries by $1,114,181 for the year 1960. The Company's proportionate share of accumulated net profits of such subsidiaries, not taken up, amounted to $595,414 at December 31, 1960.

Note B—At December 31, 1960, the Company's portion of the unexpended balance in The M. A. Hanna Company Pension Plan for Licensed Officers and Stewards amounted to $436,605. The Company, at the same date, had an unexpended balance in an account known as the "Supplemental Retirement Account" of $293,910. Neither balance is included in the consolidated balance sheet as the funds deposited in accordance with the plans were charged against income when they were deposited.

Note C—The Company was contingently liable, as guarantor of the performance of Hanna Nickel Smelting Company (unconsolidated subsidiary) relative to certain provisions of an agreement between that company and an Agency of the United States Government.

Accountants' Report

Board of Directors
The Hanna Mining Company
Cleveland, Ohio

We have examined the consolidated financial statements of The Hanna Mining Company and its consolidated subsidiaries for the year ended December 31, 1960. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying consolidated balance sheet and summaries of consolidated income and earnings used in the business present fairly the consolidated financial position of The Hanna Mining Company and its consolidated subsidiaries at December 31, 1960, and the consolidated results of their operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

ERNST & ERNST

Cleveland, Ohio
February 21, 1961